

# QT027

## Liquid Cooled Gas Engine Generator Sets

Standby Power Rating  
27 kW 60 Hz



### GENERAC 2.4L ENGINE

Naturally Aspirated  
Gaseous Fueled  
Meets 2009 EPA Emission Regulations

## STANDARD EQUIPMENT

- All input connections in one single area
- High coolant temperature shutdown
- Low oil pressure shutdown
- Low coolant level automatic shutdown
- Overspeed automatic shutdown
- Crank timer
- Exercise timer
- Oil drain extension
- Cool flow radiator
- Closed coolant recovery system
- UV/Ozone resistant hoses
- Watertight state of the art electrical connectors
- Mainline circuit breaker
- Radiator drain extension
- Battery charge alternator
- 2 Amp static battery charger
- Battery cables
- Battery rack
- Fan and belt guards
- Isochronous governor
- Flex fuel line
- Hour meter

## FEATURES

- Innovative design and fully prototype tested
- UL2200 Listed
- Solid state frequency compensated voltage regulator
- Dynamic and static battery charger
- Sound attenuated acoustically designed enclosure
- Quiet test for low noise level exercise
- Acoustically designed engine cooling system
- High flow low noise factory engineered exhaust system
- State of the art digital control system with R100 digital control panel
- Watertight electrical connectors
- Rodent proof construction
- High efficiency, low distortion Generac designed alternator
- Vibration isolated from mounting base
- Matching Generac transfer switches engineered and tested to work as a system
- All components easily accessible for maintenance
- Electrostatically applied powder paint

# GENERAC®

# APPLICATION & ENGINEERING DATA

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## GENERATOR SPECIFICATIONS

TYPE .....	Synchronous
ROTOR INSULATION.....	Class H
STATOR INSULATION.....	Class H
TOTAL HARMONIC DISTORTION.....	<5%
TELEPHONE INTERFERENCE FACTOR (TIF) .....	<50
ALTERNATOR OUTPUT LEADS 3 PHASE .....	4 wire
BEARINGS.....	Sealed Ball
COUPLING.....	Flexible Disc
LOAD CAPACITY (STANDBY RATING).....	27 kW
EXCITATION SYSTEM.....	Direct

**NOTE: Generator rating and performance in accordance with ISO8528-5, BS5514, SAE J1349, ISO3046, and DIN6271 standards.**

## VOLTAGE REGULATOR

TYPE .....	Electronic
SENSING .....	Single Phase
REGULATION.....	± 1%
FEATURES.....	V/F Adjustable Adjustable Voltage and Gain LED Indicators

## GENERATOR FEATURES

- Revolving field heavy duty generator
- Directly connected to the engine
- Operating temperature rise 120 °C above a 40 °C ambient
- Insulation is Class H rated at 150 °C rise
- All models are fully prototyped tested

## CONTROL PANEL FEATURES

- SEVEN LED INDICATOR LIGHTS
  - System ready
  - Low fuel pressure
  - Low battery
  - Low oil pressure
  - High coolant temp/low coolant temp
  - Overspeed
  - Overcrank
- INTERNAL FUNCTIONS:
  - 3 position switch (auto, off and manual)
  - 2 wire start for any transfer switch
  - Communicates with the Generac RTS transfer switch
  - Built-in 7 day exerciser
  - Selectable engine speed at exercise
  - Governor controller is built into the master control board
  - Temperature range -40 °C to 70 °C
- ADDITIONAL FUNCTIONS
  - Utility sensing
  - Delay on utility failure for engine start
  - Engine warm-up before transfer
  - Delay to retransfer to utility
  - Engine cooldown timer
  - Exerciser not set
  - Hour meter

## ENGINE SPECIFICATIONS

MAKE .....	Generac
MODEL.....	Inline 4
CYLINDERS.....	4
DISPLACEMENT.....	2.4 Liter
BORE.....	3.41
STROKE.....	3.94
COMPRESSION RATIO.....	8.5:1
INTAKE AIR SYSTEM.....	Naturally Aspirated
VALVE SEATS.....	Hardened
LIFTER TYPE.....	Hydraulic

## GOVERNOR SPECIFICATIONS

TYPE .....	Electronic
FREQUENCY REGULATION.....	Isochronous
STEADY STATE REGULATION.....	± 0.25
ADJUSTMENTS FOR:	
Speed .....	Yes
Droop.....	Yes

## ENGINE LUBRICATION SYSTEM

OIL PUMP .....	Gear
OIL FILTER.....	Full flow spin-on cartridge
CRANKCASE CAPACITY.....	4 Quarts

## ENGINE COOLING SYSTEM

TYPE .....	Closed
WATER PUMP.....	Belt driven
FAN SPEED .....	1980
FAN DIAMETER.....	17.75 inches
FAN MODE.....	Pusher

## FUEL SYSTEM

FUEL TYPE.....	Natural gas, propane vapor
CARBURETOR.....	Down Draft
SECONDARY FUEL REGULATOR.....	Standard
FUEL SHUT OFF SOLENOID .....	Standard
OPERATING FUEL PRESSURE.....	5" - 14" H <sub>2</sub> O

## ELECTRICAL SYSTEM

BATTERY CHARGE ALTERNATOR.....	12V 30 Amp
STATIC BATTERY CHARGER .....	2 Amp
RECOMMENDED BATTERY .....	Group 26, 525CCA
SYSTEM VOLTAGE.....	12 Volts

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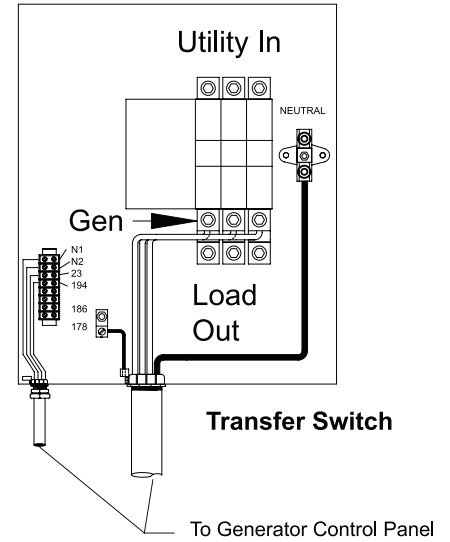
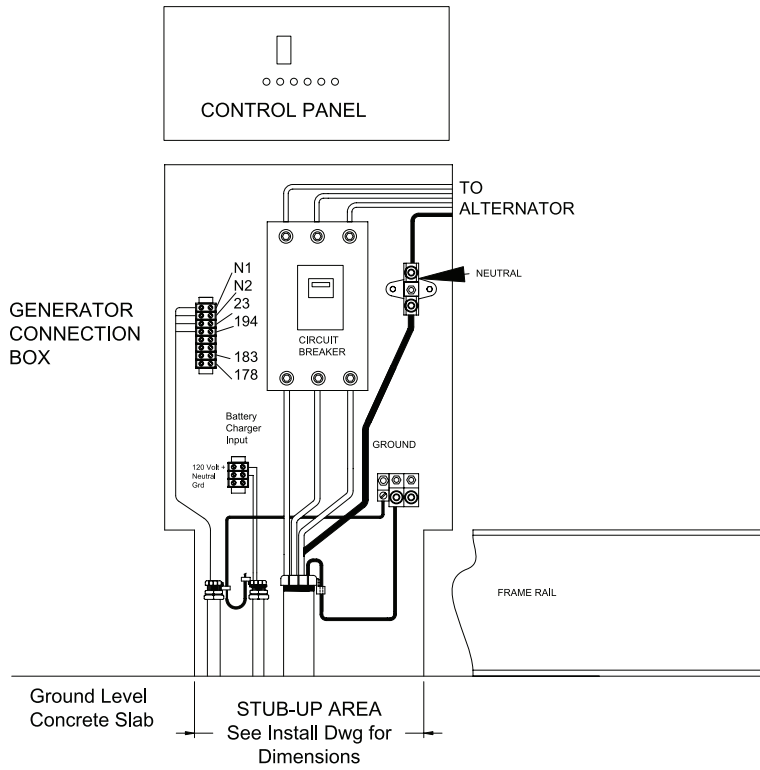
## OPERATING DATA

		QT027				
<b>KW RATING</b>		27				
<b>ENGINE SIZE</b>		2.4 Liter Inline 4				
<b>GENERATOR OUTPUT VOLTAGE/KW - 60Hz</b>		<b>KW Nat. Gas</b>	<b>AMP</b>	<b>KW LPG</b>	<b>AMP</b>	<b>CB Size (Both)</b>
120/240V, 1-phase, 1.0 pf		25	104	27	112	125
120/208V, 3-phase, 0.8 pf		25	87	27	94	100
120/240V, 3-phase, 0.8 pf		25	75	27	81	90
<b>GENERATOR LOCKED ROTOR KVA AVAILABLE @ VOLTAGE DIP OF 35%</b> Single phase or 208 3-phase		43				
<b>ENGINE FUEL CONSUMPTION (Natural Gas) (Propane)</b>		<b>Natural Gas (25 kW)</b>		<b>Propane (27 kW)</b>		
		(ft <sup>3</sup> /hr.)		(gal/hr.) cu ft/hr		
Exercise cycle		42		0.44 16		
25% of rated load		108		1.2 44		
50% of rated load		197		2.2 81		
75% of rated load		287		3.2 118		
100% of rated load		359		4.1 147		
<b>ENGINE COOLING</b>						
Air flow (inlet air including alternator and combustion air) ft <sup>3</sup> /min.		2,400				
System coolant capacity US gal.		2.5				
Heat rejection to coolant BTU/hr.		120,000				
Max. operating air temp. on radiator °C (°F)		60 (150)				
Max. ambient temperature °C (°F)		50 (140)				
<b>COMBUSTION AIR REQUIREMENTS</b>						
Flow at rated power 60 Hz cfm		68				
<b>SOUND EMISSIONS IN DBA</b>						
Exercising at 7 meters		62				
Normal operation at 7 meters		75				
<b>EXHAUST</b>						
Exhaust flow at rated output 60 Hz cfm		130				
Exhaust temp. at muffler outlet °F		900				
<b>ENGINE PARAMETERS</b>						
Rated synchronous RPM 60 Hz		1800				
HP at rated KW 60 Hz		40				
<b>POWER ADJUSTMENT FOR AMBIENT CONDITIONS</b>						
Temperature Deration						
3% for every 10 °C above - °C		25				
1.65% for every 10 °F above - °F		77				
Altitude Deration						
1% for every 100 m above - m		183				
3% for every 1000 ft. above - ft.		600				
<b>ENCLOSURE</b>						
Material		Aluminum				
Color		PMS 422 (Bisque)				

RATING: All three phases units are rated at 0.8 power factor. All single phase units are rated at 1.0 power factor. STANDBY RATING: Standby ratings apply to installations served by a reliable utility source. The standby rating is applicable to varying loads for the duration of a power outage. There is no overload capability for this rating. Ratings are in accordance with ISO-3046-1. Design and specifications are subject to change without notice.

# INTERCONNECTIONS

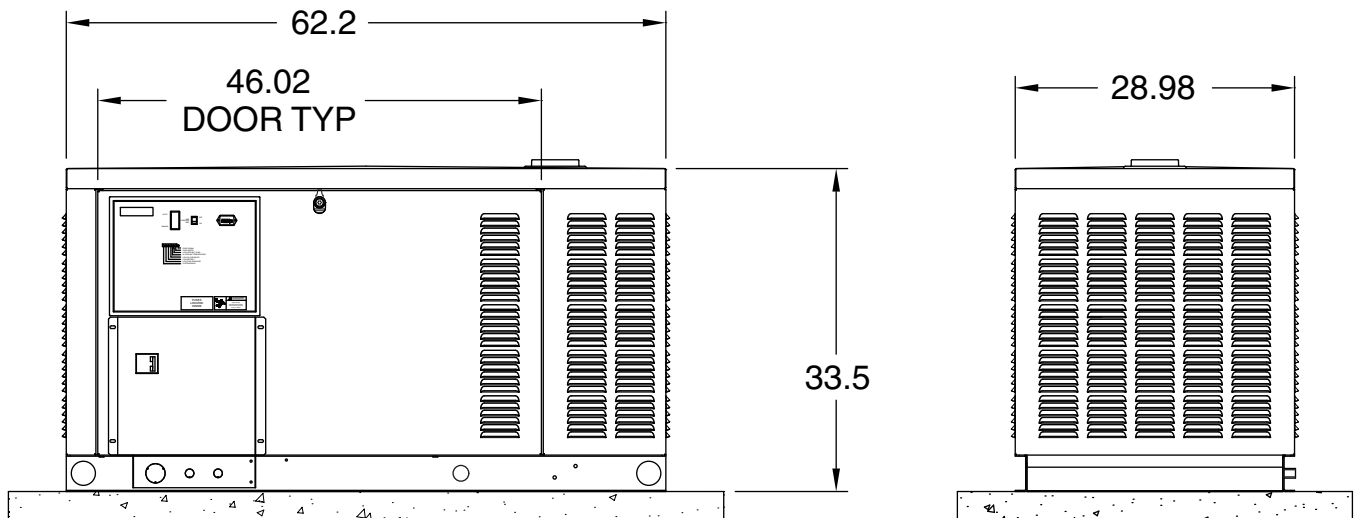
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KW	CIRCUIT BREAKER SIZE		
	VOLTS	/ AMPS	LUG SIZE
27	240 1 Ø	125	#2 to 1/0
27	208 3 Ø	100	#4 to 1/0
27	240 3 Ø	90	#4 to 1/0

Installation Drawing Ref. No. 0G0325

# INSTALLATION LAYOUT



SEE INSTALL DWG 0G9370 FOR DETAILS

FRONT VIEW

WEIGHT: 891 lbs.



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